

CLAIMS:

1. A polymeric material with antistatic properties, characterised by comprising a dispersion of ions within a polymeric matrix containing heteroatoms.

2. A polymeric material as claimed in claim 1, characterised in that the ions dispersed within the polymeric matrix originate from the dissociation of at least one salt.

3. A polymeric material as claimed in claim 2, characterised in that the ions dispersed within the polymeric matrix originate from the dissociation of at least one inorganic salt.

4. A polymeric material as claimed in claim 2, characterised in that the ions dispersed within the polymeric matrix originate from the dissociation of at least one organic salt.

5. A polymeric material as claimed in claim 2, characterised in that the ions dispersed within the polymeric matrix originate from the dissociation of at least one polyelectrolyte.

6. A polymeric material as claimed in claim 3, characterised in that the ions dispersed within the polymeric matrix originate from the dissociation of a halide.

7. A polymeric material as claimed in claim 6, characterised in that the ions dispersed within the polymeric matrix originate from the dissociation of a chloride.

8. A polymeric material as claimed in claim 7, characterised in that the ions dispersed within the polymeric matrix originate from the dissociation of a chloride of an alkaline metal, an alkaline earth metal or a transition metal of block d and f.

9. A polymeric material as claimed in claim 3, characterised in that the ions dispersed within the polymeric matrix originate from the dissociation of lithium chloride.

10. A polymeric material as claimed in claim 3, characterised in that the ions dispersed within the polymeric matrix originate from the dissociation of sodium chloride.

11. A polymeric material as claimed in claim 3, characterised in that the ions dispersed within the polymeric matrix originate from the dissociation of potassium chloride.

12. A polymeric material as claimed in claim 5, characterised in that the ions dispersed within the polymeric matrix originate from the dissociation of lithium tannate.

13. A polymeric material as claimed in claim 5, characterised in that the ions dispersed within the polymeric matrix originate from the dissociation of a polymethacrylate.

14. A polymeric material as claimed in claim 5, characterised in that the ions dispersed within the polymeric matrix originate from the dissociation of a polystyrenesulphonate.

15. A polymeric material as claimed in claim 5, characterised in that the ions dispersed within the polymeric matrix originate from the dissociation of poly(α , β -glutamic) acid.

16. A polymeric material as claimed in claim 5, characterised in that the ions dispersed within the polymeric matrix originate from the dissociation of poly(sulphonate trimethylene oxyethylene) acid.

17. A polymeric material as claimed in claim 5, characterised in that the ions dispersed within the polymeric matrix originate from the dissociation of the lithium alcoholate of polyethyleneglycol 400.

18. A polymeric material as claimed in claim 5, characterised in that the ions dispersed within the polymeric matrix originate from the dissociation of polyallyldimethylammonium salt.

19. A polymeric material as claimed in claim 5, characterised in that the ions dispersed within the polymeric matrix originate from the dissociation of a cationic chitosan.

20. A polymeric material as claimed in claim 5, characterised in that the ions dispersed within the polymeric matrix originate from the dissociation of a poly-(4-butylpyridinium)-ethylene salt.

21. A polymeric material as claimed in claim 5, characterised in that the ions dispersed within the polymeric matrix originate from the dissociation of a poly-(2-N-methylpyridinium)-ethylene salt.

22. A polymeric material as claimed in claim 5, characterised in that the ions dispersed within the polymeric matrix originate from the dissociation of a polyallylammonium salt.

23. A polymeric material as claimed in claim 1, characterised in that the polymeric matrix pertains to at least one polymer having, in its chains, polar functional groups or heteroatoms such as O, N, P, Si, S, Se and able to coordinate metal ions and anions.

24. A polymeric material as claimed in claim 23, characterised in that the polymeric matrix pertains to a plastic material from casein.

25. A polymeric material as claimed in claim 23, characterised in that the polymeric matrix pertains to a material based on cellulose or its derivatives.

26. A polymeric material as claimed in claim 23, characterised in that the polymeric matrix pertains to a resin obtained by polycondensation.

27. A polymeric material as claimed in claim 26, characterised in that the polymeric matrix pertains to a resin included in the group comprising aminoplasts, aniline resins, furan resins, ketone resins, epoxy resins, alkyd resins, polyester resins, polyether resins, polyamide resins, sulphonamide resins, silicones and polythioethers.

28. A polymeric material as claimed in claim 1, characterised in that the polymeric matrix pertains to a resin obtained by polymerization.

29. A polymeric material as claimed in claim 28, characterised in that the polymeric matrix pertains to a resin included in the group comprising polyvinyl, ethers, polyacetals, polyvinylpyrrolidone, coumarin resins and polyacrylic resins.

30. A polymeric material as claimed in claim 1, characterised in that the polymeric matrix pertains to a resin obtained by polyaddition.

31. A polymeric material as claimed in claim 30, characterised in that the polymeric matrix pertains to a polyurethane resin.

32. A method for preparing a polymeric material with antistatic properties claimed in one or more of claims 1 to 31, characterised by introducing into the polymeric matrix of a resin containing heteroatoms, in the absence of moisture, at least one electrolyte having a very high degree of purity in terms of the presence of polar molecules able to bind to the ionic lattice of said electrolyte.

33. A method as claimed in claim 32, characterised by reacting the resin containing heteroatoms with a salt having low lattice energy.

34. A method for preparing a polymeric material with antistatic properties as claimed in claim 32, characterised by reacting the resin containing heteroatoms with an inorganic salt.

35. A method for preparing a polymeric material with antistatic properties as claimed in claim 32, characterised by reacting the resin containing heteroatoms with an organic salt.

36. A method as claimed in claim 32, characterised by utilizing the polymeric matrix of a resin obtained by polycondensation.

37. A method as claimed in claim 32, characterised by doping the resin containing heteroatoms with a polyelectrolyte.

38. A method as claimed in claim 32, characterised by doping the resin containing heteroatoms with a polyelectrolyte in the presence of solvents.

39. A method as claimed in claim 32, characterised by utilizing the polymeric matrix of a resin obtained by polymerization.

40. A method as claimed in claim 32, characterised by utilizing the polymeric matrix of a resin obtained by polyaddition.